

WEEKLY EDITION

OF THE

THOMAS G. NEWMAN,
EDITOR.

Vol. XXI. July 15, 1885. No. 28.

APICULTURAL NEWS ITEMS.

EDITORIAL AND SELECTED.

Life is a burden—bear it;
Life is a duty—dare it;
Life is a thorn-crown—wear it;
Though it break your heart in twain,
Though the burden crush you down,
Close your lips and hide the pain,
First the cross, and then—the crown.

A Good Honey Crop is generally reported, so far. We have received a few complaints, but the preponderance is in favor of a large yield.

Do not forget the National Bee-Keepers' Union. Send the fees (\$1.25), and a printed blank will be sent to you by return mail, to fill up with your vote for permanent officers.

The California Bee-Keepers are again attacked. An exchange states the case in this manner:

"The Fresno fruit-growers are going directly to work to crush bee-culture. A complaint has been filed in the Superior Court of San Diego County, charging a person living 30 miles distant, with keeping hundreds of colonies of bees, willfully and maliciously to eat up and destroy the fruits of the labor of citizens living in that vicinity. The prayer of the plaintiff is that he may have judgment and decree of the Court that the keeping of said bees is a nuisance and that it be abated, and that he may recover from defendant, as damages for injury done, the sum of \$1,000."

It seems as if the bee-interests are being attacked from all quarters. Where is the same man who says we have no need of an organization to protect our rights?

We shall publish the names of members of the National Bee-Keepers' Association next week. Let every one who has the interest of the pursuit at heart, become a member *at once*. Before laying this paper away, let us hear from you. The only way to meet ignorant and selfish attacks is by facing the enemy—meeting force by superior force—trusting in the right, but "keeping our powder dry." We want no half-hearted laggards in the army, but the vigorous, stout-hearted, patriotic, undaunted and daring are welcome! If we can raise a column of patriots sufficiently strong to present a good front, we shall dare the envious ones to "bring on their law-suits," and by "an imposing array" and "unbroken front," gain a lasting and permanent victory!

Rendering Beeswax.—In answer to many inquiries for the best method of rendering beeswax, we give the following from a correspondent. He uses a wax extractor, and the wax coming from it is allowed to drip into a large pan, and is again warmed over and then set aside to cool. Just as soon as it has cooled sufficiently to form a crust over the top, break a hole in this crust and pour out the warm wax into dishes or pans, greased a little with lard to keep from sticking. Pour gently, and if any pollen or colored matter makes its appearance, it is not sufficiently cool. All sediment or foreign substance will rise to the top or settle to the bottom of the wax. In cooling, this is held in the crust, and the clear, pure wax is poured off. A good wax-extractor is indispensable, and pays for itself very soon, by the additional quantity of wax secured.

Fight between Bees and Hornets.—A correspondent in the Baltimore *Herald* gives the following particulars of such a fight, which he says he witnessed:

"The most remarkable and exciting scene I ever witnessed, was a fight between a swarm of bees and a colony of hornets. Hornets build their nests out of a material not unlike paper, which is molded into concentric layers. The nests often attain the size of a man's head, and are occupied by about 200 hornets. One day a swarm of bees took flight from a bee-hive of my father's, and made its way through a peach orchard, for a piece of underbrush about 200 yards from the hive. They alighted on an apparently deserted nest of hornets. It took about two seconds for the 200 hornets to come out of their den and attack the invaders. The battle was hot and furious. The air was filled with a prolonged buzz as the combatants flew at each other and tried to use their stings. A great many on each side were killed, but the hornets carried the day."

More Lying about Bee-Keepers.—The Chicago *Daily News* of last Thursday repeats another of those bare-faced lies about a Michigan bee-keeper, who, it says, feeds glucose to his bees in order to have them fill the combs with it, and sell it for honey. The falsity of the article is at once shown by the fact that honey can now be bought as cheaply as glucose, and people are not liable to adulterate unless they can make something by such dishonest practices. The daily press of the Country are now, more than ever before, craving for sensational matter. They pay largely for such, no matter whether there is a grain of truth to build on or not! Anything for a sensation!

The *News* is clever at arguing and chuckles over the following:

"The Michigan apiarist has opened a field so broad that it seems almost boundless. The possibilities suggested by his successful experiment are bewildering. If by straining glucose through bees a man can get honey, why may he not strain chalk and water through them and get choice milk or cream, or banquet them on soap-grease and get prime Orange county butter? Why may he not feed them on logwood and cheap alcohol and obtain a first-class brand of port wine? or, by substituting some other ingredient for the logwood, get a 'superior article' of any other convivial beverage?"

The National Bee-Keepers' Union has been formed, for the purpose of defending the rights and protecting the interests of the bee-keepers of America. Every person interested in the pursuit should *at once* send for a copy of the Constitution, voting blank, etc., and become a member. Address "National Bee-Keepers' Union," 925 West Madison street, Chicago, Ill.

Organize for Defense.—Mr. A. G. Hill, editor of the *Bee-Keepers' Guide*, remarks as follows about the necessity of bee-keepers organizing in defense of their rights:

"Necessity is the Mother of Invention." Whether our bees have a right to free pasturage, or whether from a different standpoint bee-keepers ought to be compelled to keep their bees entirely on their own premises, and should they not do so, be liable to damages, real or imaginary, for trespass, is a matter which sooner or later will require settlement by law. 'A stitch in time saves nine,' is a very plain adage and will apply, perhaps, in a way, to this matter. We cannot afford to have a decision in court brought against us—that is positive. When it comes to legal proceedings, bee-keepers will all be on one side—the side of right and truth as demonstrated by the very nature of bees to go and come whithersoever they will. Considerable money is being used up by bee-keepers to carry on petty suits against them, whereas even a decision in our favor in a common court amounts to no decisive victory to us as a body, for a verdict rendered here in favor of bees might elsewhere be given against them. If bee-keepers would unite on some plan of action in this matter, and carry it out, much individual expense would be saved, and good to all would be achieved. It has been suggested that a good plan would be for each bee-keeper in the United States to put in one dollar toward making a defense, which would require the value of 50 farms like the one in question, to oppose. The importance of the decision would justify a very extensive defense or investigation. This method would make necessary an organization made up by a prompt enlistment of members."

Relative to the Article on page 387, concerning the correspondence by Mr. Allen Pringle in our Canadian cotemporary, we notice in the last issue of that paper the following from Mr. Pringle:

"After reading Mr. Newman's explanation, I feel that I ought in justice to him, as well as myself, to add a few more words on the subject. The editorial note in the *AMERICAN BEE JOURNAL* of Dec. 24, 1884, to which Mr. Newman refers, and in which he says he noted the birth of the *Kansas* weekly, must have escaped my attention, as I had no knowledge of the *Kansas* weekly when I corrected the proof of my article in February or March; and it had no existence at all when the article was written."

Immediately following this the editor remarks "that the article on 'Apiculture' was duly credited to the *Popular Science Monthly* on page 93," and then adds: "We were not at fault as the *AMERICAN BEE JOURNAL* has, through error, we believe, decided."

To this we will briefly say that the article was published in the Canadian paper in two numbers, neither one of which was credited either at the beginning or end, as is usual in such cases! The item on page 93, being entirely disconnected from the article in question, does not really give credit for it, because it may so easily be overlooked by any one seeing the article itself, and hence wrong conclusions be arrived at, as was the case by the *Kansas Bee-Keeper*, the editor of which remarks in substance as follows, last week:

"Taking it for granted that the article in question was original with the Canadian paper, we saw no reason why Mr. P. should omit to mention the *Kansas Bee-Keeper* in connection with the American weeklies, for its advertisement as a weekly was then in the very paper in which the article appeared as original."

With these explanations the subject is dismissed from our columns. The Canadian paper is young and inexperienced, and evidently intended to credit the article. All should be magnanimous, and "take the will for the deed." Now, "let us have peace!"



WITH
REPLIES by Prominent Apirists.

Brood in the Sections.

Query, No. 84.—What is the cause of bees filling the sections with brood, and drone brood at that, and what is the remedy for it? I put on one case of sections some time ago, thinking that the bees were crowded for room, and perhaps would be forced to swarm when there was no bloom to sustain swarms, and I find the above result. Would you destroy the drone-comb, or cut off the heads of the drones in the cells? Please answer in the Query Department.—S. D.

W. Z. HUTCHINSON says: "There are different causes for bees putting brood in sections. I cut the trouble short by using queen-excluding honey boards."

PROF. A. J. COOK answers: "They are over-crowded, I should say. If the comb is white and nice, cut off the heads of the drones; otherwise, melt up the comb for wax."

DR. C. C. MILLER replies: "Cause: Too free communication with surplus room. Remedy: Heddon's skeleton honey-board, or zinc or wooden perforated queen-excluder. If drone-brood is sliced off, it will be more economical, but the comb will be a little dark."

G. W. DEMAREE says: "If you put on the section-cases at a time when the brood department is crowded, and but little surplus honey is being gathered, the queen is most likely to deposit eggs in the sections. I would shave off the heads of the drones, and extract the honey from the sections after being filled. Combs after having brood reared in them, are unfit for table use."

JAMES HEDDON answers: "Perhaps you did not get on your sections till the bees had crowded the queen below, with honey. If your bees are pure Italians, they are more apt to crowd the queen below, after the sections are put on. If the combs below were all worker, and you gave your bees a chance to dictate the size of the cells above, of course they would build drone-comb there, and the queen would make haste to deposit eggs therein, as the only place to rear any drones, something that unreasoning nature impels them to do; but reasoning man knows that it is not for the best. As it is likely the comb is already soiled, I would advise taking away the comb, and replacing it with a full-sized piece of worker foundation."

J. E. POND, JR., replies: "The cause is very simple. The heat naturally rises to the sections, and the queen in her desire to rear drones, goes into the sections for that purpose. The remedy is to use worker foundation only in sections, and allow a small amount of drone-comb to remain in the brood-chamber. The queen is simply fulfilling one of the laws of her

nature, when she lays eggs in drone-cells; and if she cannot find such in the brood-chamber, she will go into the sections. In my own experience, I have never found any worker brood in sections, save in one or two instances, where the queen had been crowded out of the brood-chamber, owing to the sections not being placed on the hives as early as they should have been."

DR. G. L. TINKER says: "Queens go by freaks sometimes (at least some Italian queens are prone to), and lay eggs everywhere in the hive, in the drone-comb of the sections as well as in the worker-cells of the brood-combs. The remedy for queens laying in the sections is a queen-excluder. A beespace above the brood-frames is no hindrance to the queen entering the sections. I have often found queens in supers when no eggs were laid. If there are but few drone (we seldom find any worker), larvae found in the sections pick them out; if many, extract the honey and melt up the comb."

G. M. DOOLITTLE remarks: "The querist seems the more surprised that the brood in his sections was drone-brood, while if I should find any but drone-brood in sections, I should be as surprised as he; for I have yet to see worker-brood in sections, unless the colony was a new swarm and commenced house-keeping up-stairs. The cause of drone-brood in sections is, the restriction of drone-comb below, together with a light flow of honey; and the remedy is, filling the sections with comb foundation of the worker size. If the brood is found before it is sealed over, the sections can be taken from the hive and left in a cool place for 3 or 4 days, until the brood dies, when, if placed on the hive again, the bees will fix all as good as ever; if sealed over, destroy it, as the comb will be so colored by the brood, that the honey would have to be sold for second or third quality."

Fertilizing Queens.

Query, No. 85.—Which is the best plan of fertilizing queens in confinement?—J. C.

PROF. A. J. COOK says: "So far as I know, there is no practical method."

DR. C. C. MILLER replies: "I do not believe that any successful plan has yet been discovered."

JAMES HEDDON says: "I give it up."

DADANT & SON answer: "There is no such thing as fertilization in confinement. Those who claim to have succeeded are either deceiving others or have deceived themselves by careless experiments."

J. E. POND, JR., remarks: "There is no best plan of fertilization in confinement; in fact, there is no plan for such fertilization that is worthy of the name. Nature for various reasons has provided that the queen should meet the drone in the air outside of the hive, and there is no practical method yet devised to improve on nature."

G. M. DOOLITTLE answers: "After trying faithfully all the plans ever given, only to fail, I feel that I am excusable for saying that I doubt any one ever having a queen fertilized in confinement. They may think so, but for all that the chances are that the queen was fertilized as all queens are when not known by the experimenter."

DR. G. L. TINKER replies: "I think it unadvisable to fertilize queens in confinement, and hence have given this matter no attention. The ultimate result of such practice, if it could be accomplished, would be to injure the wing-power of the workers."

G. W. DEMAREE says: "There is no best plan, because no reliable plan to mate queens in confinement has been discovered. Since we can control the drones by excluding drone combs, and by using the perforated zinc, the 'confinement plan' has lost most of its desirability."

Drones and Drone-Comb.

Query, No. 86.—Will bees swarm if drones and drone-comb are kept out of the hive?—W. H. H.

JAMES HEDDON answers: "Yes."

W. Z. HUTCHINSON says: "Yes."

DR. C. C. MILLER replies: "I think that they will; but absence of drones and drone-comb is, to some extent, preventive."

PROF. A. J. COOK remarks: "Most assuredly, if they are pressed for room. The mere fact of such absence has little or no restraining effect."

G. M. DOOLITTLE replies: "I have yet to see the hive containing a populous colony during June and July, that had not a few cells of drone-comb in it; and I do not believe that it can be kept out, for worker-comb will be changed to drone-comb if it cannot be gotten otherwise."

G. W. DEMAREE answers: "In view of my experience, I answer yes. Every year I have a few colonies of hybrids, and these are deprived of all drone-cells, and are not allowed to rear any drones; they swarm as promptly as other bees."

DR. G. L. TINKER replies: "Yes; because the absence of all drone-comb in a hive does not prevent the rearing of drones in worker-cells, and vast quantities of them, too, when the bees want them. It would be interesting to see a bee-keeper keep the drones out of a few dozen colonies when they take a notion to rear them."

Convention Notices.

The Cortland Union Bee-Keepers' Association will hold a basket picnic at the apiary of Mr. Miles Morton, at Groton, N. Y., on Tuesday, Aug. 18, 1885. All bee-keepers, with their families, are cordially invited to be present.
W. H. BEACH, Sec.

The Union Bee-Keepers' Association of Western Iowa will meet in Stuart, Iowa, on July 25, 1885, at 10 a. m.
M. E. DARBY, Sec.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♂ north of the centre; ♀ south; ♂ east; ♀ west; and this ♂ northeast; ♀ northwest; ♂ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

The Contraction Method.

JAMES HEDDON.

During the past three years I have been carefully testing a hive-contraction system, and I have found it of great value, as regards both summer and winter success. It has become a permanent system in my apiaries when running for comb honey, and now, after testing it for three seasons, I feel prepared to speak of what I know.

I hive all swarms, whether first or second swarms, upon five Langstroth frames of foundation, filling up the rest of the space in an 8-frame hive, with 2 contractors or "dummies," A, A, as shown in the illustration. I find that the queen uses these five combs to that extent that I get as much brood in them as in any 7 combs where the whole 8 are used. The 5 combs become nearly 5 solid sheets of brood, and where they are reversible, quite all brood. Certain it is that these contractors in no way tend to increase the amount of honey stored, but to a great extent they tend to increase the amount stored as surplus, and decrease the quantity stored as winter stores.

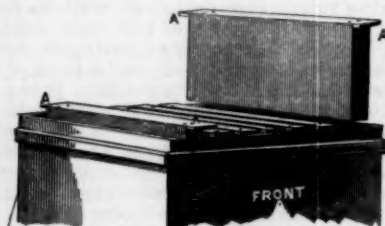
This contraction also keeps much bee-bread out of the hive, leaving it in the field, which is by far the best and most economical reservoir for it, in this locality. With this treatment, a prime swarm commences work in the cases at once; I usually place one case on the hive when hiving a swarm. A second swarm usually commences in the surplus cases in 2 or 3 days after being hived.

In autumn, when the honey harvest is over, the little brood-chamber contains but little honey and pollen (almost none at all if the bees are Germans). I now have the honey in the supers that, with the 8-frame system, would have been in the hive, and perhaps in the market, and I am now ready to feed the colony sugar syrup for winter. When fed, the bees are in a condition where all their stores are accessible, and to winter with absolute certainty if they are kept warm enough. Whether the brood-chambers are almost honeyless, or partially stored, depends upon the nature and duration of the honey-flow, and the blood of the bees. Most

bee-keepers are aware of the fact that Italians are more prone to load the brood-chamber, regardless of the surplus department, both early and late in the season, than are the German bees.

While the system is so nearly perfected that with any bees I bring nearly all of the colonies out at the close of the season so as to take one-half or more of their winter and spring stores through the feeder, I have it complete as far as Germans and most hybrid colonies are concerned. I am now at work with assurance of perfecting the system, so as to bring out all brood-chambers, with any bees, in a perfect starvation condition, our honey all gone into the market, and our colonies all ready to receive the winter food prepared by the bee-masters, as their whole winter and spring stores. I believe that sugar syrup is better than honey as spring stores, till the weather is quite warm, and till the bees can fly daily.

I keep the bees on these 5 combs, after placing them on the summer stands, until the spreading of the queen and the advance of the sun north of the equator calls for more room, when I remove the contractors, replacing 3 combs which are put in



A A shows the two Contractors—one nearly in position, and the other just ready to go down into the hive.

the positions occupied by the contractors, or among the combs of brood, spreading them, according to the weather and force of the colony. When this colony swarms, I hive its swarm on 5 combs, as above described, and then on the twentieth day after swarming, I go to the old hive and find, as a rule, a young fertile queen, eggs in the centre combs, and three or more combs with considerable honey and no brood, which I remove, replacing them with the contractors. This old colony is soon in the supers, having a 5-comb brood-chamber filled solid with brood.

I have had colonies, after casting 3 swarms, at work in the supers within 5 days after contracting. I think that the advantages of this contracting system will be seen; or it may be called an enlarging system; that is, enlarging the brood-chamber for about 6 weeks during the time that the queen is not only the most prolific, but when such prolificness gives us bees to become field-workers, just when we most need them. I think that it will also be seen, too, with what advantage reversible frames may be added to this system. I make the contractors by making a wide frame just the same width all around,

and just the size of the standard Langstroth brood-frame. It is no division-board, as it has all the same bee-spaces as has the brood-frames, and thus manipulates very easily. When the frame is made, I nail a 1/2-inch board upon each side, and in the middle I place a little cubic block, a little smaller than the width of the frame; by nailing each side to this block, they will be just a little concave.

"Through all the summer days," the contractors are kept at the same distance from the sides of the hive and adjacent combs, as the combs are kept from each other; but in winter I move them back close to the sides of the hive, thus aiding as non-conductors, and giving a little more wintering room; these two points are non-essentials however.

Some of the contractors I fill with chaff, some with sawdust, and I also have 300 made of solid wood, but these are only 1/2 of an inch thick, and each pair replaces but 2 combs, leaving 6 instead of 5. When 6 are used the spaces of the honey-board exactly break joints with the spaces below, as with 8 combs; but with 5 combs I move the honey-board side-wise as much as it will go and still rest solid on the hive, and then I leave the break-joint feature of the honey-board perfect as before. It was by the use of this 5-comb system that I first got my best test of the great value of the break-joint feature of the honey-board. I never knew how much more queens and combs would work up through when they ought not to, till I placed a lot of honey-boards on some contracted hives, and in such a manner that the slots corresponded vertically instead of breaking joints with each other.

My first thought was to have these contractors, broad-frames filled with sections, but experience taught me, first, that we did not need any more surplus room with a Langstroth hive and complete "tiering-up" system; second, it adds complication to have storing in sections going on in the brood-chamber; and third, the honey stored there is not fit for market, at least none that I have ever seen comes up to my standard. If it was only started there, and finished in a better place, it might do, but as such a system complicates labor still more, why should we use the place when we have all the room we want without it, and in a far better and handier position? I have not been troubled with the queen entering the sections, when I used the honey-board in proper position, though it is not queen-excluding, the slots being 3/4 of an inch or double bee-passage.

I notice that others have been contemporary with me in working out the advantages of contracting, but so far as I have read, I have not as yet seen it systematized as a summer and winter management. I have here endeavored to so place it before my fellow-bee-keepers, and I do it with the full conviction that we can and will lessen the detail labor of manipulations, and keep all the advantages of this valuable system.

Dowagiac, 9 Mich.

Indiana Farmer.

Prevention of After-Swarms.

F. L. DOUGHERTY.

Preparatory to casting the first swarm, a colony will build from 5 to 20 queen-cells. With 2 or 3 of these finished and capped over, they are ready to go, and if the weather be favorable, out they come. Almost every bee at home, when they start, leaves with the swarm, even to the very youngest not quite able to fly; these latter, of course, return to the hive in a few moments. Bees returning from the fields soon discover the loss of bees and queen, but make no attempt to follow. At this time the combs are very full of young hatching bees, and it sometimes is surprising to notice how many will come out in the space of a few hours.

Queen-cells started and left unfinished at the leaving of the swarm, are continued and finished, and others also may be started after the leaving of the swarm. Under ordinary circumstances, the first young queen that hatches out, if left to "her own sweet will," would visit all other queen-cells in the hive, tear open each cell and sting its occupant; but should the weather continue favorable, the colony having grown quite strong again, they are not satisfied, so they protect these cells, from her royal highness. Being a "her," one may easily judge her humor at a disputed authority in her own home; she leaves with many followers, and her sisters may do likewise, from the same cause, until 5 or 6 after-swarms may be cast by the one colony.

Now we may take advantage of this instinct and prevent all after-swarms by removing these queen-cells on the same day, or the day before this first young queen makes her appearance. If queen-cells be removed on the same or a few days after the first swarm leaves, there being plenty of eggs and young larvae, the bees will build more cells at once, thereby defeating the object for which we remove the cells. The coming of after-swarms can always be foretold by the "piping" of the young queen, which once heard will never be forgotten. It is rather an angry, discordant "squawk," and is easily heard by placing the ear close to the side of the brood-chamber of a hive.

If at the time of swarming the swarm's hive be placed on the old stand, and the old hive moved to a new location, all of the working bees will be drawn to the new colony, thus depleting the old hive to such an extent that it is hardly likely to cast a second swarm. Where honey is the main object, and increase not desirable, the old hive may be moved only a few inches, and a little to the rear, then after 8 or 9 days, removed to a new location. The bees which have hatched out and taken location from the old hive, will enter the new hive when the old one is taken away, and being of the same colony, with honey coming in, they will take up their new quarters without molestation.

The latter plan is a good one where bees are in box-hives, or in such condition that they cannot readily be examined. After-swarms in general are of little account as honey-gatherers, they being so few in numbers. When they exist it is better to put 2 or 3 into one hive; the bees will soon settle the question, or the queens themselves, as to which is to be which.

Indianapolis, ☉ Ind.

Read at the Maine Convention.

Mistakes About Bee-Keeping.

MRS. L. M. CROCKETT.

If all bee-keepers realized what a privilege it is to meet with others of the same avocation, we should have a general assembling together when the Maine State Association holds its yearly meeting. But all have not become enthusiastic in bee-culture, and it takes time to work a reform among bee-keepers as well as any other class of individuals, yet we are glad that there are enough interested in the work to make it profitable to be here, and to welcome all as friends and helpers who are friendly to the cause of apiculture. That we make mistakes in our occupation as well as in anything else, no one will deny; and it is one object of this meeting to devise means to rectify those mistakes, some of which I will mention. It is a mistake to take the bees' good summer honey and leave them to get new or go without. Our bees should be looked after as closely as any of our farm stock, and when the profit comes, remember the honey-flow is substantially at an end, take away what may prove injurious, and supply what we know to be good.

It is a mistake not to give our bees good ventilation in winter. A crust over the snow either from sun or rain, may prove fatal if left but a few days. It is a mistake when we think that success year after year is not the best proof of ability. It is a mistake for any one to keep to themselves useful knowledge about bees, when by letting it be known it would benefit others in the same occupation. It is a mistake when we think that our own State does not afford just as good authority as any we can get, when we have scores of bee-keepers with practical knowledge far superior to any we can glean from those who have not experienced our cold winters, or varying honey seasons; who can tell us what to do better than those who have lived and taken care of bees for years in our midst? We can all read the same books on apiculture, the same bee-papers filled with useful knowledge from the pens of people who have spent the best parts of their lives among the bees; but what we want and need is the experience of people in our own State, with like surroundings as ourselves.

It is a mistake to think that it is nothing but recreation to keep bees at a profit. We shall never accomplish much in any direction without hard work. It is as true that "eternal

vigilance" is the price of success in bee-keeping as in any other industry, and it is a bad mistake when a person thinks that his bees will take care of themselves, and him too. It is a mistake for bee-keepers not to attend bee-associations when they come within limits; to stay at home thinking that they will not get pay for their time, or that they will get it all in the papers; when the fact is, there are many useful ideas expressed, many suggestions made and experiences related, that never find their way into print.

It is a mistake when we think that we know it all. Both ancient and profane history give us accounts of the honey-bee, but not until within the last century has it received the attention which it so richly deserves; and see what progress has been made. Do you think we shall stop here? No doubt at the close of the next century posterity will look back from a stand-point as far in advance of us as we are in advance of the last century. Let us all try and aid the cause that we love so well, remembering that whatever we do is worthy of our best endeavor.

For the American Bee Journal.

Getting Bees into the Boxes.

22—J. B. MASON, (80).

Having kept bees for the past 22 years, commencing with the box-hive, then changing to the American movable-frame hive, then to the National, Kidder, Adair, and lastly to the Langstroth, where I halted; and having found considerable trouble many times in getting the bees to go into the boxes, and that, too, when there was plenty of honey coming in, and the hive full of bees, some 6 years ago I accidentally found a plan that entirely obviated this trouble. Having never seen it, as I remember of, in any of the bee-papers, I will here give the manner in which I discovered the plan, and which will also fully explain the method:

In the year 1879 a man came to my apiary and wanted to purchase a colony of bees. I showed him around, and out of 40 colonies only one suited him, and that one was then working in the boxes. I named a price for it, but he thought that it was too high. I then named another price with the understanding that I was to remove the case, which was then $\frac{3}{4}$ or more filled; this offer he accepted. At this time I had 20 or more colonies that ought to have been in the boxes, but were holding back. I then decided to use the sections containing new honey to get the other colonies to work by putting 2 or 3 of them upon each hive. On two of the sections I found say a cupful of bees, so I took these two sections and put them into a case over a colony that I thought strong enough to go into the boxes. Before night I found the case crowded with bees, and well at work drawing out the starters.

I thought to myself, "now I have it," so I at once distributed the re-

mainder of the sections in cases over strong colonies, but while they had plenty of new honey, they had no bees in them. Upon examining them the next day, I found no bees in the cases, and the honey was removed below. This was a hard one on my new plan; but finally this thought occurred to me, "Is it not these young wax-workers that are secreting wax that do the business?" I at once went to the hive of the bees that I had got to work in sections, and removed some of the sections with the clusters attached to them, and put these into the other hives, and the bees went into the cases at once, and I have never seen it fail where there were sufficient bees to work in the boxes.

Mechanic Falls, 9 Maine.

Prairie Farmer.

Swarming, Introducing Queens, etc.

MRS. L. HARRISON.

White clover is not as abundant as it often is, there being not more than one-third of a crop, in comparison with former years, in this locality. It yields little nectar, as cool, wet weather has prevailed since it began blooming, and hot nights are requisite for its secretion in this important plant. When the forenoon is hot, in the afternoon bees are busy, but the flow is not continuous. With a constant yield of honey, the comb is very white, and almost imperceptible when eaten.

Bees are now swarming, the very best colonies issuing first. Italians come forth generally without preparation. To-day, on opening a hive from which a very large swarm issued yesterday, no trace of queen-cells could be discerned. I always run my apiary on the plan of pulling down and building up, i. e., take frames of brood to build up colonies, from those where increase would be undesirable, and thus prevent their swarming. I save all the queen-cells I can from the best colonies. If nuclei have been formed long enough for them to build cells of their own, they will accept those given them. If these cells are older they will hatch out first, and destroy all others. When the young queens are laying, the swarms can be built up strong. Some apiarists introduce fertile queens to old colonies, as soon as they have swarmed, claiming that it prevents after-swarms, and keeps them strong.

When bees are storing honey rapidly, it is best not to disturb them. The young queens can be kept in nuclei, and when honey fails, and the time of the colony is not valuable, the new queens may supplant undesirable ones. When a colony has been queenless for some time, it is apt to abound in laying workers, improperly called "fertile workers." These will invariably destroy all introduced queens. It is difficult to kill them, as they look like other workers. The eggs of these laying workers produce drones only, and may be discovered at a glance, the worker-cells being too small for their large bodies, the cells

for them are built up higher, and are also much more scattered than worker brood. If the comb of such a colony is exchanged for that of a vigorous one, removing brood and bees, but being careful not to take the queen along, the introduced young bees will not be satisfied with these laying workers, and will destroy them and rear a queen of their own. Sometimes these laying workers will allow the rearing of a young queen, and destroy her on her return from her "wedding tour." I have found that the best way to manage these pests, is to virtually make a new colony as described. The addition of one or two frames of brood will not do; better make a complete exchange of combs.

A queen that does not mate because of imperfect wings, or other deformity, will lay, and her eggs produce drones only. Such a queen can be readily discovered and destroyed, a fertile one being introduced.

Some persons fail in introducing queens, from not bearing in mind that the first requisite to success is that there is no other queen, or cell from which one is expected, in the hives. A queen not more than an hour or so old, may be allowed quietly to run into the top of a hive where there are sealed cells, and be received, the bees not knowing but she came from their own cells; but when the queens are older, or have been in the hands of the operator, acquiring the scent of the person, they will be destroyed. If there are no eggs or young larvae in a hive, it is positive that there is no laying queen (there might be a young one); if eggs and larvae are given to such a colony, if queenless, cells will be started within 48 hours. If a queen is to be introduced, the comb containing the cells might be removed, and the bees, finding all sources for a queen gone, will accept the one offered. Cages which can be pressed into the comb, covering brood and honey, are much used for introducing queens. They are covered with wire gauze, through which the bees can feed the queen, cross their antennae, and make her acquaintance. She can be liberated by cutting a hole through the comb back of the cage, or letting the bees gnaw her out. Mailing-cages are furnished with tin points for fastening them upon the comb. Small cages the size of an old-fashioned tin pepper-box cover, are made of a rim of tin with a wire gauze top, and can be pressed into the comb, to cover a queen, or to protect a queen-cell ready to hatch.

Many persons having black bees are desirous of Italianizing them. It is often difficult to find a black queen, as these bees do not cling to the comb like the Italians, but gather in clusters on the bottom of it; falling off they creep up under the operator's clothing, and are a pest generally. I have taken out the frames of a black colony several times, and careful observation failed to find the queen. Once I brushed all the bees off the comb, and placed them in a clean hive; then removed the hive from its former stand the length of a sheet

spread upon the ground, placing the hive with the comb upon its place, then drove the bees back to it with smoke; when the bees were apparently all back, I had not found the queen. On stretching out the sheet, a few bees were seen clustered together, and poking among them I discovered her.

When I wish to remove a black queen, I brush off all the bees from the combs, place them in an empty hive, and put in front of it a bee entrance-guard. This is a piece of zinc having perforations large enough for worker-bees, but not for drones and queens. I remove the old hive and put this prepared one in its place. The queen to be introduced should be caged on one of the combs. The bees in the old hive are then poured down in front of it, and may be allowed to enter it at leisure. If they refuse to do this, because their queen is with them, drive them with smoke, and when the workers are in, the drones and queen will be found on the outside, and may be destroyed. In most cases, had the Italian queen been placed upon the comb, she would have been accepted, after this driving operation, yet it is safer to cage her. At the end of 48 hours, if the bees have not released her, let her out; if kept in longer, they may build queen-cells and refuse to accept her. Some apiarists let a queen run into the top of a colony after dark, claiming it to be a safe plan; if an Italian queen is accepted all right; in 90 days the blacks will all have disappeared, and the hive will be full of golden-banded Italians.

When honey is coming in freely, bees are on their good behavior, and accept strange queens more readily than when it is scarce. Once during an abundance of apple bloom, I brushed the bees from the combs, putting them into an empty hive, and, seeing the black queen, destroyed her. I then sprinkled the bees, together with the Italian queen, with sweetened water; the wet bees all entered the hive together, and prospered. The driving and sprinkling gave the bees something else to think about, than disputing over the acceptance of a strange queen.

Peoria, Ills.

For the American Bee Journal.

Honey-Bees as Fertilizers.

G. L. TINKER, M. D.

It is a matter of surprise that so much ignorance prevails in regard to the usefulness of the honey-bee to the farmer and other land-owners, in fertilizing the flowers of the white clover, and increasing the seed produced, rendering possible our thickly-set white-clover pastures which afford the richest and most relished forage for all kinds of stock. Take from the country the honey-bee, and in a few years our fine white clover pastures would be no more.

During the fall of 1884, a great drouth prevailed throughout Ohio, and nearly all the white clover was

killed, and during the past spring there was scarcely a leaf or stem of it to be seen. But the ground was covered with seed, thanks to the diligence of the honey-bee (which is about the only insect that visits the flowers of the clover), and the spring being favorable for the growth of the grasses, there has been an extraordinary setting of the young plants of the white clover, and now sheep and cattle and horses are relishing in the great abundance of it. But it will not bloom till another year, when the bees will again be on hand to fertilize the flowers that the seed may be developed against a possible and similar emergency. There is nothing more certain than that the stock-raiser who strikes at the honey-bee, strikes at his best friend.

New Philadelphia, Ohio.

Connecticut Farmer.

Queenless Colonies in the Spring.

H. L. JEFFREY.

The active cause of queenlessness is a continued opening of the hive and over-hauling the combs to find out the condition of the bees. The over-hauling of the combs at any time between October and the latter part of May, unless it is warm working weather, puts the bees into a kind of panic, and a natural instinct of the worker bees to protect their queen, makes them cluster around her. The frightening of the rest will frighten her, and the more the workers are frightened, the closer they cluster on the queen and hug her, the greater is the danger of her being smothered, and if not smothered, she is so greatly frightened and over-heated as to make her barren in the future.

The same over-hauling causes the bees to fill themselves with honey more than is needed for subsistence, resulting in an unnatural formation of excrement, and as a bee cannot discharge it unless it can fly, the overloading of the intestines produces a weakness, and diarrhea is the result.

At each opening of the hive, quite a number of bees fly out never to return, and at each opening the population is continually becoming less, till only a mere handful is left from the once populous colony. And as each opening causes an unnecessary gorging of the bees with stores, be it syrup or honey, instead of only one pound a month being consumed from October till April, they will be forced to use from 2 to 4 pounds in the same time. Careful experiments show that a fair-sized colony, if left alone from Nov. 15 until May, will only consume about $5\frac{1}{2}$ to 6 pounds of stores in that time, while, if disturbed, they use from 12 to 20 pounds, besides in other ways suffering harm. If the hives are where continual passing jars them, it will be likely to do harm, especially if the weather is such as to keep the bees from flying.

The disturbing of the bees also provokes breeding, which, if carried on to any extent, is almost sure to be the cause of destruction, unless the

weather should be suitable for brood-rearing; then success is the consequence instead of utter failure.

Although the above are very common causes, there are others that are not under the control of the apiarist, and from which many die, but the above are always the result of smart, self-confident ignorance. Bees in box-hives never are troubled that way; but those in frame-hives are. You cannot over-haul the box-hive, as you can the frame-hive.

Washington Depot, Conn.

For the American Bee Journal.

A Standing-Frame Hive.

J. H. ANDRE.

On page 330 I mentioned a new hive which I intended to give a trial. I find that the description was incorrect, and now I wish to rectify the mistake.

To make the hive, mitre together a box 16x16, inside measure, by $11\frac{1}{2}$ inches deep, cut a rabbet on the inside, all around, $\frac{3}{4}$ of an inch down, and $\frac{1}{2}$ of an inch wide for frame-rests; if tins are put in the rabbet needs to be deeper. Groove the hive in the centre at the top on all the sides $\frac{3}{8}$ of an inch wide by $\frac{1}{2}$ -inch in the side of the hive, and 2 inches down the hive, for a cross to rest in, which should be made of good, stiff timber halved together in the centre. From the lower part of the groove for the cross-rest, run the groove $\frac{1}{4}$ by $\frac{1}{4}$ of an inch to the bottom of the hive on all sides for division-boards; this will leave four spaces to hang in frames 7 13-16x7 13-16 inches square. As the frames are an odd size, they are not kept in stock, but can be easily made from strips $\frac{1}{2}$ of an inch wide, running a part of them over a saw, to cut a groove for the foundation guide. Cut the top-piece of the frames $8\frac{3}{4}$ inches in length, the side-pieces $10\frac{1}{2}$ inches, and lower pieces 7, and nail them so the frame will be 7x10 inches, inside measure.

Hang in 4 frames in one space, the inside one middling close to the cross, and shove the inner ends close up, with the side of the frame against the side of the cross; this gives a bee-passage between the outer ends of the frames and the hive, and also avoids too much space under the cross-pieces. Now hang in 4 frames in another space with the sides of the frames to the ends of the others, and just far enough from the ends of the other frames to leave a passage for the bees when the frame is well filled with honey; this will leave one-half warm and one-half cold frames. Nail on strips 2 inches wide and $\frac{1}{2}$ an inch thick, 1 inch from the top of the hive, for a cover-rest. They may be from 6 to 8 inches high, and the top made of matched lumber, the grooves being well filled with paint when put together. The bottom is made of matched boards 2 feet long, the ends of the centre pieces being cut down to the tongue of matching before putting them together, 8 or 9 inches in length and one foot wide, for an entrance to the hive.

The cases may be made for 4 rows of sections, $4x4\frac{1}{2}$ inches, outside, by using thin lumber, with the exception of two of the side pieces. Sections that are a little longer than wide, look very much better than square ones.

I have made four of these hives, and I like them for the following reasons: 1. The brood-chamber is in good shape. 2. The bees can get to any part of the hive from the centre; I believe they will winter better in them for that reason. 3. The frames are small, easy to handle, and in building up weak colonies a frame may be gotten nearly all brood or all honey, as required. 4. The frames need no wiring, and a weak colony may be confined on 4 of the frames, and be in a neat, compact shape instead of being strung out in a bad shape, as they are when confined on 2 or 3 Langstroth frames.

Some might want more frames, and perhaps it would be as well to put in 5 in opposite corners of the hive. I would like to have some one try this hive this season, and then report.

Lockwood, N. Y.

British Bee Journal.

The Mental Life of the Bee.

DR. DONHOFF.

There are actions of animals which depend upon acquired ideas. Ideas are retained as with men of collective impressions. The retained ideas appear sharper, and more like mental impressions, than the ideas which are retained by men from mental impressions. If a hive stands among many of similar appearance, the bee returning from the field finds her own hive again. The bees that swarm retain the scent of the queen, that runs about freely in the hive and collect around her. I gave to a magpie, within half an hour, 12 coins and pieces of bread, which she hid in the most different places of the garden and field, and concealed with earth, or with a leaf and earth. Some places I marked by sticking in a bit of wood. On the next following days coins, as well as pieces of bread, were gone.

The swallows, which migrate to Egypt, and sometimes to the neighborhood of the equator, come back again to the place where they were born. A farmer at Dinslaken, not far from Orsoy, has accustomed a nightingale to come into his room and eat at the table where he sits. Last year it returned again for the third time. The animals could not come back again if there was not still, after half a year, present to their minds the picture of the country, which impressed itself upon them on the home journey. The ideas of animals are associated according to the same law of similarity as the ideas of men. The bee, which returns from the field and sees the hives, associates with one of them the picture and position of the hive which was impressed upon it at its first outward flight; it recognizes the identity between its idea and one of the hives which it sees, and

thus is it enabled again to find its hive.

On the front of the hive I stuck some blue paper; 14 days after I stuck yellow paper upon it. The bees returning from the field hesitated long before they settled, and at last they flew not to the entrance, but mostly to places of the hive distant from it. The mental idea of the yellow hive, the idea of the blue hive presenting itself again to the consciousness, and the difference of these pictures, were causes of the hesitation.

If a hive is changed to another stand, the bee makes hovering flights by way of finding its bearings. The difference of the picture necessitates these flights for the purpose of noting its bearings. If a colony has swarmed, every bee makes at its first outward flight these bearing-noting hoverings, even if the swarm has been put in the place of the mother-hive. There must consequently have been an idea of the act of swarming retained, which presented itself to the bee's consciousness at its outward flight. But there must be with the higher animals more complicated associations of ideas, which the bees do not possess. If a servant has been accustomed to feed the pigs, they get up when they hear that servant's footsteps, and hasten to the feeding trough. This kind of association appears to me to occur in all mammals and birds.

A colony of bees may be fed every evening, but the bees will never hasten to the feeding-trough when they see their owner coming. If a dog has had a beating, he runs away when he sees the stick taken up. I let bees fly in my room, caught them, and pressed them repeatedly, which is unpleasant to them; for if they are let loose, they run or fly away from it. But I could never notice that a bee flew away when I made with my finger as though I would catch it.

But the thing in which animals are deficient is, as Johann Muller remarks, the faculty of forming conceptions. The bee is incapable of forming the idea of several ideas, of forming generalizations; it cannot form the conception of honey, it cannot, therefore, form a general idea; it cannot form the idea that honey is sweet; it does not apprehend the connection which exists between honey and sweet. Because the essential connection between things escapes animals, because their mind may harbor a world of individual ideas, but they cannot find the stationary pole in the series of phenomena, on that account are they so limited. If one of the higher animals has accidentally done something whereby advantage has been gained, it repeats this. My magpie continually threw about some yellow, blue, and red papers, which I had laid at the bottom of its cage. I several times concealed a bit of meat under the blue paper; when it threw about the blue paper again, it found the meat and ate it up eagerly. After it had found meat under the blue paper several times, and I again laid papers in the cage, it only attended to the blue. Similarly I accustomed it to

draw a piece of meat, which hung by a thread under the cage. But to form conclusions from the analysis of conceptions, to deduce actions that would be useful to it, of this it was just as incapable as any other animal. But there do occur acts of animals which do not depend on experience.

In these acts of instinct the bee stands higher than any other animal; it is the proper representative of instinct. Its remarkable household, with its labor, its comb construction—wonderful on account of the skill manifested, more wonderful because of the mathematical problem that is solved in it—have been from of old the admiration of men. I have been close to swallows, and seen them build. I have seen the more remarkable web woven by spiders, but the thing that has charmed me most is the legerdemain-like skill with which a bee takes out a scale of wax from between the abdominal rings, and with which it attaches the particle when duly kneaded. Who has not been touched by the marvelous nature-rule which impels a worker-bee to make way for her queen when she walks over the comb to lay her eggs?

For the American Bee Journal.

The Sheep-and-Bees-Suit.

J. F. LATHAM.

On page 372, a correspondent styles the "sheep-and-bees-suit" a "bugaboo." Why not use the suit more literally in dressing the thing up, and call it "ba-a-et bug." It does not appear feasible that bee-keepers should display any "sheepishness" in "taking up the glove" in a contest so absurdly ridiculous as the one in question, when, like the bubble swelling from the bowl of the juvenile's pipe, its only support must emanate from blowing, to culminate in—nothing. If a Quotie display is actually needed to enliven the spirit of the times, why not gratify the thirst for legendary notoriety by donning the basin and target, shouldering the lance, and, mounting Vozinante, go out in true representative attitude? It is quite certain that the laurels won would be quite as mellifluous as those which graced the brow of the famous hero of La Mancha.

Reflection is a sterling educator. Perhaps, if the complainant in this "suit" should "stand back" and think awhile, he might become conscious of what may, eventually, be the effects of results that portend his action against the defendant. If I mistake not, the so-called heathen civilizations countenanced no private claims to the mellifluous productions of nature; accepting them as the spontaneous effusions of the elements, in the popular mode of thinking—the "gift of the gods"—the elemental guardians. Were they, in their teachings right, those students of the open book of nature? Is the verification of such teachings by modern science defective? Or is it a duty, consonant to methods of reasoning on a baseless system, to attempt to right the im-

aginative wrongs of ages, and establish a criterion that discrimination and jealousy, as sharp as that of modern cultivation, failed to make a point of aggressive contention?

In the height of their civilizations, the ancient Egyptians, the Phœnicians, the Greeks, the Romans, and their less progressive neighbors, gave more or less attention to the apiculture of their times, which was regulated, to a certain degree, by customs and laws. But I feel safe in stating that the exudation of the flowers—"the honey of the air"—was held to be as free, to all who might keep bees to gather it, as the rain from the clouds; in fact, if I rightly construe the teachings of history, the pursuit of bee-keeping was fostered by the ruling dynasties of the times, by allowing the tillers of the soil certain minor privileges consistent with conflicting interests; i. e., no one was allowed to keep bees where they would endanger public travel, or places of resort; or in quantities that would give one husbandman a monopoly of the pasturage. Those simple regulations of the dark ages seem to embody about all that is necessary for a more advanced age.

That bees will prevent herds of any kind from grazing, when the grazing ground is but a moderate distance even, from their hives, my experience does not verify. I have worked at mowing on a piece of ground intervening the hives of my 20 colonies and a piece of buckwheat, when the bloom of the wheat and the air over my head was alive with bees, and no notice was taken of myself or horse by the busy insects during their foraging hours. I have mowed so near the same piece, when it was "roaring with bees," as to cut some of the stalks of grain near the edge, without evidence of danger from angry bees. The piece of grain alluded to was about 40 rods from my apiary. When foraging, aggression of a stinging character is not one of the honey-bee's characteristics. The mind-its-own-business traits, aside the foraging hours of the bee, and those of grazing animals, neutralize their cause for a conflict of interests as to pasturage. Where proper facilities are provided for protection from the heat of the sun, most kinds of stock, and especially sheep, will graze only during the cool hours of the day; while the honey-subsisting bee revels in the sunshine during the hours when the chalice of the flower is replete with nectar—her chosen food—which such conditions are the most favorable in producing.

But why dilate on bottom facts, when, if I am not in error, the agitation culminating in a suit of this kind bears an aspect evincing phases of a different signification than a call for judgment between apistical and Gregorian privileges? It is not simply a matter of mutton and wool vs. honey and wax, although bee-keepers are challenged to contest it on that line; neither is it, in a definite sense, a local question to be adjudicated by courts possessing State jurisdiction only; but it is a National question,

involving the rights of every individual bee-keeper in the land, whether possessing one or a thousand colonies. Cumberland, ? Maine.

Dixie Farmer.

Natural and Commercial Glucose.

ARNOLD DELFFS.

I hold that organic products, changed into other by the agency of man, are not what they appear to be, i. e., what they are usually called. They are, though greatly resembling certain natural compounds, nevertheless, strictly speaking *sui generis*. Allow me to illustrate. Mix nitric acid with sugar (or various other organic compounds), and the result will be a crystallized acid, considered identical with that found in oxalis acetosella principally; consequently termed oxalis acid. Both are considered identical; science at least says so. But still, there are a few of their respective combinations where the parallel fails, being not the same under any and all circumstances; I hold they are two different substances. Pure natural glucose is the sweet found in fruits, especially grapes (raisins) and figs; it is altogether harmless. But for commercial purposes, it is prepared by mixing starch with water and a little sulphuric acid (oil of vitriol) and boiling it for hours in large earthenware-lined vessels; then neutralizing the still free acid by lime, filtering and evaporating to dryness. As regards chemical test, no injurious matter can be found. Barely—I doubt if any—traces of acid remain, and the resulting salt (sulphate of lime; plaster of Paris) is inert; being insoluble.

Here let me point out two weak arguments—the one made by the advocates of glucose, and other similar artificial compounds; the other by many of its antagonists. As for the former, they do not know, do not want to know, that chemical tests in nine cases out of ten, utterly and completely fail, when applied to injurious organic matter; i. e., analysis is unable to detect its hurtful qualities. Dr. Gall, whilst recommending his "gallized" (sugared and watered) grape juice, applied to chemists to find anything hurtful in his wines; knowing full well that he was talking balderdash. But to the multitude such chat was logical and convincing. On the other hand, you sometimes meet with allies overzealous and consequently inconsiderate. They fire away with pop-guns, whilst repeating rifles are at hand; so, too, in this instance.

Before going any further, another fact must be mentioned. There is a certain dire disease termed diabetes; it consists in this, that the system changes all the starch contained in the patient's food into glucose, or something like it, in lieu of carboic acid, as it does in normal cases. Medical men affirm that the use of artificial, so-called glucose, often brings on that disease. What could sound more plausible, but that it

should act as an exciting cause? Natural genuine glucose is not charged with such injurious consequences; this alone proves that the two are not the same, though chemistry fails to point out any difference. I think the objection I named might be compared to a loaded repeating gun; whilst the charge of the others—that the traces of sulphuric acid or sulphate of lime possibly detected in the artificial product, could produce any perceptible effect whatever—win the noise made by pop-guns. Such allies are weak ones at best.

But let us suppose—for mere argument's sake—that artificial glucose is not injurious, would that justify us to palm off adulterated honey as the genuine article? If you say "yes," you must necessarily contend also that it is right to counterfeit coins, provided it be done so skillfully as to defy detection. The mere saying, "that it is altogether a different thing," amounts to nothing, if you are unable to point out any difference. And who would countenance for a moment such as selling spurious grapes and other relics as genuine articles? Fraud and deception are nothing more nor less than a direct violation of the commandments, "thou shalt not bear false testimony against thy neighbor," and "thou shalt not steal."

Shelbyville, © Tenn.

For the American Bee Journal.

The Season in Kentucky, etc.

JNO. T. CONNLEY.

We are experiencing the hardest season on bees that has been known for many years. The clover bloom was light, and contained but little nectar, besides for more than three weeks of day-time that it was in bloom, the weather was too unfavorable for the bees to do anything; most of the time there was a strong north and east wind, with cold nights; on the morning of July 1, the mercury stood at 48°, making it too cold for bees!

I think that Mr. Doolittle's suggestions are good—that those who keep both sheep and bees give their evidence to Mr. Freeborn as to whether bees are an injury to sheep, or whether or not they interfere with sheep grazing on white clover.

For eight years I have kept both bees and sheep, and every summer I have an average of 140 sheep and lambs, and I often go to the pastures to observe the state of the clover bloom, but I have never known a sheep to get a bee-sting; for by the time the bees are on the clover the sheep are full, and take to the shade. In Kentucky, sheep do their eating at nights and mornings, while the dew is on the grass; especially during June and July, the time of clover bloom.

There has been but little swarming in this county (Gallatin); I have not heard of as many as 25, all told. I have had but 5 from 90 colonies. My apiary is in good condition, and I

have enough honey to run the bees; but I will get no surplus this year. I have taken only one barrel of extracted honey, and I will take no more this season. I send \$1.25, as I want to be a member of the National Bee-Keepers' Union. I favor anything that will honorably further the interests of our favorite industry.

Napoleon, 8 Ky., July 8, 1885.

For the American Bee Journal.

Father M. Quinby.

J. R. D.

What does the "M" stand for? None of his so-called biographers have yet told us. Capt. J. E. Hetherington, Cherry Valley, N. Y., in a memorial published in a work entitled "Quinby's New Bee-Keeping," fails to show when or where this famous untutored naturalist was born. All we are told is that he was sixty-five years old at his death, and that he was a Quaker.

In the "Introduction" (page 17) of the above work, the remark is made: "Fifty years ago, Mr. Quinby, then a lad of nineteen," etc. As the work is dated 1884, this would leave the date of the period in 1834, when Mr. Quinby began bee-keeping. Taking the nineteen from 1834 would leave the year 1815 as the one in which was born the "father of practical bee-culture" in America.

Then again, by the use of subtraction and addition we find that Mr. Quinby should have been 69 instead of 65 years of age at his death. Capt. Hetherington, on page 16 of the work alluded to, says: "Thus, at the age of sixty-five, ended the life-work of our counsellor, friend, and public benefactor."

Mr. L. C. Root, Mohawk, N. Y., in his preface, to the edition before me, dated May, 1879, although claiming a close intimacy with Mr. Quinby, fails to furnish anything that is clear on this point.

Can you, Mr. Editor, or any of your able contributors, inform me where I can obtain an instructive and clear biography of one of America's greatest of naturalists?

[We invite Mr. L. C. Root, who is a son-in-law of the late Moses Quinby, to prepare a biography for the BEE JOURNAL, for the satisfaction of the many who delight to honor the memory of that distinguished pioneer of apiculture. We regret to say that we can add nothing to what is contained in that excellent book—"Quinby's New Bee-Keeping."—ED.]

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

SELECTIONS FROM OUR LETTER BOX

Good Crop of White Clover.—J. W. Sanders, Le Grand, ♂ Iowa, on July 3, 1885, writes:

Our bees in Central Iowa are just booming now, and they are just where they ought to have been about June 1. Swarming and all are about one month late. I never have seen a better show of white clover than now. I rode over several miles of country yesterday, and it looks to me as if there are 500 heads of clover to every bee in the country. Many bees were lost by the hard winter and spring dwindling. From the best I can learn, about one-half of them died.

Moving Bees in the Hot Sun.—W. H. Downs, Stoneville, ♂ Miss., on June 29, 1885, says:

A few days since I moved 10 colonies of bees, having transferred them successfully, and loaded them on a wagon. I moved them 25 miles and lost 9 colonies out of the 10. The sun was too hot.

Sowing Buckwheat.—G. L. Rankin, Weston, ♂ Ky., asks the following question:

When is the best time to sow buckwheat for fall honey, or for bees to work on in the fall?

[It should be sown during this month, and the earlier the better, in order to serve the bees for fall use. Sow broadcast on rich soil; three pecks to the acre.—Ed.]

Sheep and Gad-Flies.—Dwight Furness, Furnessville, ♂ Ind., writes:

We have owned a large flock of sheep for years, and with large numbers of bees in this vicinity I can testify that they do not molest the sheep while foraging. The plaintiff in this suit no doubt mistook the troublesome gad-fly, for the bees. (See an account of the same in "Randall's Sheep Husbandry.")

Bees are Busy.—11—R. C. Aikin, (11—21), Shambaugh, ♀ Iowa, on July 4, 1885, writes:

Everybody seems taken with the Bee-Keepers' Union; I am, too, but more so with the increase in bees and honey. I am now getting my first crop of clover honey. Never before has white clover been abundant enough here to yield a surplus. I have already increased my stock from 11 colonies to 21, and I will easily treble if not quadruple it by Sept. 1. One new colony on scales has averaged 1½ pounds per day since June 13. Basswood will begin to open to-day, while clover is yet good. Bees gathered as much to-day as on any day.

The Honey Harvest, etc.—James Heddon, Dowagiac, ♀ Mich., on July 6, 1885, says:

The clover harvest is a good one here, and basswood is full, and will open in 4 or 5 days. We are now practicing "modern transferring" with over 50 colonies, and with perfect and uniform success, notwithstanding the cool nights. I would never think of the old method again. Reversible frames are a great blessing, and I could not be induced to use any other. Their advantages are beyond my

greatest expectations. Mr. W. G. Fish (on page 406) has given about all the argument or proof against the "pollen theory" that I have seen lately. I never saw a case, nor before heard of one, where bees wintered on natural stores voided nothing after a long confinement, or short one either, for that matter. Is Mr. F. mistaken, or is it possible that some honey is entirely free from nitrogen? His hives must have been so arranged as to well protect their inmates from the 28° temperature when it lowered to that point. It still remains that diarrhetic excreta is nitrogen—pollen.

Alsike Clover.—A. C. Goff, Syracuse, ♂ N. Y., asks the following:

I send a clover blossom taken from clover that grows about two-thirds as high as red clover, and very fragrant. I find patches of it in a field of red clover. What is the name of it?

[The clover is Alsike. It is not uncommon for patches to come up in red clover fields, as a little of this seed is sprinkled among the red clover seed in many cases. Yesterday I saw a 10-acre field of this Alsike clover in full bloom, and roaring with bees. It was a good sight, and the man who has it is getting an immense crop of honey.—A. J. Cook.]

Basswood Looks Promising.—Wm. E. Harris, Bay City, ♂ Mich., on July 3, 1885, says:

The winter and spring losses in this locality have been fully 75 per cent. Bees are now building up lively on white clover. Basswood bids fair to be a very large yield.

Expecting a Large Yield.—Fayette Lee, Cokato, ♂ Minn., on July 5, 1885, says:

I have 24 new colonies, and my apiary now numbers 114. I shall extract honey to-morrow, for the boxes and upper stories are full. I have taken off some finished sections, and now have 1,200 on the hives, and 800 more to put on. The basswood will be in bloom in one week, and then I will be kept busy. I believe that I have one of the best apiaries in the State, and can show as good a record as any in wintering, for I lost only 6 out of 80 during the past winter and spring. My bees were in the cellar 150 days. I am getting ready for 5,000 pounds of honey this year, as the basswood is full of buds. I have some colonies that have 18 frames to work on, and besides there is a half-pail full of bees lying out.

Transferring Bees, etc.—N. L. Minor, a deaf-mute bee-keeper of Clarksville, ♂ Mo., on July 5, 1885, writes:

The BEE JOURNAL has taught me many new methods in bee-culture. There are a great many basswood trees and much clover along the hill about 400 to 500 yards south and about a mile west, north and east of my apiary. My apiary is nearly surrounded by the hill with basswood and red-bud trees. The bees are busy gathering honey from basswood and clover. I have read the discussion about transferring bees from box-hives to new hives, by Rev. O. Clute and Mr. James Heddon. Mr. Clute really has the wrong idea. There is something wrong in his plan of transferring bees. I could easily transfer bees from box-hives to new hives. I will wager five dollars that I can transfer bees at any time from February until

fall. I transferred bees from box-hives to new hives last October, and prepared them for winter; they are now in good condition. Again, I transferred 14 colonies in February and April. I favor Mr. Heddon's plan, "at any time." Some beekeepers have the idea that it is better to transfer bees from old to new hives during apple bloom. I cannot agree with them. I united 2 or 3 swarms, and they seemed to welcome each other. They did not fight nor quarrel. I extracted the honey from some old colonies, but I got only a little. I united some of them, and then gave the empty combs to new colonies, thus saving them the time to build new combs. I do not think it a good plan to prevent swarming, nor to divide colonies. I have 36 strong colonies in splendid condition. I will be glad to help any fellow-bee-keeper out of trouble. I feel sorry for Mr. Freeborn, of Wisconsin. Let us all try to help him out of his trouble. I hope that we can do it.

Abundance of Bloom, but no Nectar.—Robert Corbett, Manhattan, ♂ Kans., on July 6, 1885, says:

Up to this date the seasons of 1883 and 1884 were very poor, but the present season has been the most discouraging of the three, owing to the long continued cold and wet during the months of May and June, so much so that the bees killed their drones till late in June, and the wet still continues, with an abundance of bloom and a starvation of bees. Basswood has been in bloom for a week, but there is not much nectar in it. White clover, motherwort, catnip, mustard, blue-vervain and sweet clover, all are in bloom, and are fine to look upon, but there is too much wet. So our prospects are not very promising at present; but our motto is, "Try, try again."

Plenty of Swarms and Honey.—B. T. Baldwin, Marion, ♂ Ind., on July 7, 1885, writes:

The basswood is in full bloom, and is the most abundant bloom that I have ever seen; but it is not yielding as much nectar as it has done in other years. The bees have taken the swarming fever the worst that I have ever known, and if all my queens' wings were not clipped, I would have lost nearly every one that swarmed. Five swarms came out a week ago last Sunday. They swarmed 2 or 3 times a day for 4 days, when I broke it up and divided the bees among other good working colonies, and they went to work at once. Six of my colonies have already produced over 100 pounds of extracted honey per colony.

Robber Bees—Transferring.—G. W. Ashby, Valley Station, ♂ Ky., writes thus:

Can any of the readers of the BEE JOURNAL enlighten me on the following new (to me) case: A swarm of bees came out in due order, clustered, and was hived and put some 25 or 30 feet from the parent hive. All seemed to be working finely late in the evening, in fact too much for so short a time after swarming, and when traced up to see where such a constant stream of bees went and came in such quick succession, it was ascertained that the swarm was robbing the parent colony. It being near night when it was discovered, I closed the entrance to a single bee-space, hoping that they would forget it by the next morning; but the next day they went at it with renewed vigor; nor would they cease till the parent colony was carried some distance away and hid in the weeds. I have been keeping bees for nearly 30 years, and I have never had such an occurrence. Again, I must say

involving the rights of every individual bee-keeper in the land, whether possessing one or a thousand colonies. Cumberland, 9 Maine.

Dixie Farmer.

Natural and Commercial Glucose.

ARNOLD DELFFS.

I hold that organic products, changed into other by the agency of man, are not what they appear to be, i. e., what they are usually called. They are, though greatly resembling certain natural compounds, nevertheless, strictly speaking *sui generis*. Allow me to illustrate. Mix nitric acid with sugar (or various other organic compounds), and the result will be a crystallized acid, considered identical with that found in oxalis acetosella principally; consequently termed oxalic acid. Both are considered identical; science at least says so. But still, there are a few of their respective combinations where the parallel fails, being not the same under any and all circumstances; I hold they are two different substances. Pure natural glucose is the sweet found in fruits, especially grapes (raisins) and figs; it is altogether harmless. But for commercial purposes, it is prepared by mixing starch with water and a little sulphuric acid (oil of vitriol) and boiling it for hours in large earthenware-lined vessels; then neutralizing the still free acid by lime, filtering and evaporating to dryness. As regards chemical test, no injurious matter can be found. Barely—I doubt if any—traces of acid remain, and the resulting salt (sulphate of lime; plaster of Paris) is inert; being insoluble.

Here let me point out two weak arguments—the one made by the advocates of glucose, and other similar artificial compounds; the other by many of its antagonists. As for the former, they do not know, do not want to know, that chemical tests in nine cases out of ten, utterly and completely fail, when applied to injurious organic matter; i. e., analysis is unable to detect its hurtful qualities. Dr. Gall, whilst recommending his "gallized" (sugared and watered) grape juice, applied to chemists to find anything hurtful in his wines; knowing full well that he was talking balderdash. But to the multitude such chat was logical and convincing. On the other hand, you sometimes meet with allies overzealous and consequently inconsiderate. They fire away with pop-guns, whilst repeating rifles are at hand; so, too, in this instance.

Before going any further, another fact must be mentioned. There is a certain dire disease termed diabetes; it consists in this, that the system changes all the starch contained in the patient's food into glucose, or something like it, in lieu of carbohydic acid, as it does in normal cases. Medical men affirm that the use of artificial, so-called glucose, often brings on that disease. What could sound more plausible, but that it

should act as an exciting cause? Natural genuine glucose is not charged with such injurious consequences; this alone proves that the two are not the same, though chemistry fails to point out any difference. I think the objection I named might be compared to a loaded repeating gun; whilst the charge of the others—that the traces of sulphuric acid or sulphate of lime possibly detected in the artificial product, could produce any perceptible effect whatever—win the noise made by pop-guns. Such allies are weak ones at best.

But let us suppose—for mere argument's sake—that artificial glucose is not injurious, would that justify us to palm off adulterated honey as the genuine article? If you say "yes," you must necessarily contend also that it is right to counterfeit coins, provided it be done so skillfully as to defy detection. The mere saying, "that it is altogether a different thing," amounts to nothing, if you are unable to point out any difference. And who would countenance for a moment such as selling spurious grapes and other relics as genuine articles? Fraud and deception are nothing more nor less than a direct violation of the commandments, "thou shalt not bear false testimony against thy neighbor," and "thou shalt not steal."

Shelbyville, Tenn.

For the American Bee Journal.

The Season in Kentucky, etc.

JNO. T. CONNLEY.

We are experiencing the hardest season on bees that has been known for many years. The clover bloom was light, and contained but little nectar, besides for more than three weeks of day-time that it was in bloom, the weather was too unfavorable for the bees to do anything; most of the time there was a strong north and east wind, with cold nights; on the morning of July 1, the mercury stood at 48°, making it too cold for bees!

I think that Mr. Doolittle's suggestions are good—that those who keep both sheep and bees give their evidence to Mr. Freeborn as to whether bees are an injury to sheep, or whether or not they interfere with sheep grazing on white clover.

For eight years I have kept both bees and sheep, and every summer I have an average of 140 sheep and lambs, and I often go to the pastures to observe the state of the clover bloom, but I have never known a sheep to get a bee-sting; for by the time the bees are on the clover the sheep are full, and take to the shade. In Kentucky, sheep do their eating at nights and mornings, while the dew is on the grass; especially during June and July, the time of clover bloom.

There has been but little swarming in this county (Gallatin); I have not heard of as many as 25, all told. I have had but 5 from 90 colonies. My apiary is in good condition, and I

have enough honey to run the bees; but I will get no surplus this year. I have taken only one barrel of extracted honey, and I will take no more this season. I send \$1.25, as I want to be a member of the National Bee-Keepers' Union. I favor anything that will honorably further the interests of our favorite industry.

Napoleon, Ky., July 8, 1885.

For the American Bee Journal.

Father M. Quinby.

J. R. D.

What does the "M" stand for? None of his so-called biographers have yet told us. Capt. J. E. Hetherington, Cherry Valley, N. Y., in a memorial published in a work entitled "Quinby's New Bee-Keeping," fails to show when or where this famous untutored naturalist was born. All we are told is that he was sixty-five years old at his death, and that he was a Quaker.

In the "Introduction" (page 17) of the above work, the remark is made: "Fifty years ago, Mr. Quinby, then a lad of nineteen," etc. As the work is dated 1884, this would leave the date of the period in 1834, when Mr. Quinby began bee-keeping. Taking the nineteen from 1834 would leave the year 1815 as the one in which was born the "father of practical bee-culture" in America.

Then again, by the use of subtraction and addition we find that Mr. Quinby should have been 69 instead of 65 years of age at his death. Capt. Hetherington, on page 16 of the work alluded to, says: "Thus, at the age of sixty-five, ended the life-work of our counsellor, friend, and public benefactor."

Mr. L. C. Root, Mohawk, N. Y., in his preface, to the edition before me, dated May, 1879, although claiming a close intimacy with Mr. Quinby, fails to furnish anything that is clear on this point.

Can you, Mr. Editor, or any of your able contributors, inform me where I can obtain an instructive and clear biography of one of America's greatest of naturalists?

[We invite Mr. L. C. Root, who is a son-in-law of the late Moses Quinby, to prepare a biography for the BEE JOURNAL, for the satisfaction of the many who delight to honor the memory of that distinguished pioneer of apiculture. We regret to say that we can add nothing to what is contained in that excellent book—"Quinby's New Bee-Keeping."—ED.]

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

SELECTIONS FROM OUR LETTER BOX

Good Crop of White Clover.—J. W. Sanders, Le Grand, © Iowa, on July 3, 1885, writes:

Our bees in Central Iowa are just a-booming now, and they are just where they ought to have been about June 1. Swarming and all are about one month late. I never have seen a better show of white clover than now. I rode over several miles of country yesterday, and it looks to me as if there are 500 heads of clover to every bee in the country. Many bees were lost by the hard winter and spring dwindling. From the best I can learn, about one-half of them died.

Moving Bees in the Hot Sun.—W. H. Downs, Stoneville, © Miss., on June 29, 1885, says:

A few days since I moved 10 colonies of bees, having transferred them successfully, and loaded them on a wagon. I moved them 25 miles and lost 9 colonies out of the 10. The sun was too hot.

Sowing Buckwheat.—G. L. Rankin, Weston, © Ky., asks the following question:

When is the best time to sow buckwheat for fall honey, or for bees to work on in the fall?

[It should be sown during this month, and the earlier the better, in order to serve the bees for fall use. Sow broadcast on rich soil; three pecks to the acre.—Ed.]

Sheep and Gad-Flies.—Dwight Furness, Furnessville, © Ind., writes:

We have owned a large flock of sheep for years, and with large numbers of bees in this vicinity I can testify that they do not molest the sheep while foraging. The plaintiff in this suit no doubt mistook the troublesome gad-fly, for the bees. (See an account of the same in "Randall's Sheep Husbandry.")

Bees are Busy.—11—R. C. Aikin, (11—21), Shambaugh, © Iowa, on July 4, 1885, writes:

Everybody seems taken with the Bee-Keepers' Union; I am, too, but more so with the increase in bees and honey. I am now getting my first crop of clover honey. Never before has white clover been abundant enough here to yield a surplus. I have already increased my stock from 11 colonies to 21, and I will easily treble if not quadruple it by Sept. 1. One new colony on scales has averaged 1½ pounds per day since June 13. Basswood will begin to open to-day, while clover is yet good. Bees gathered as much to-day as on any day.

The Honey Harvest, etc.—James Heddon, Dowagiac, © Mich., on July 6, 1885, says:

The clover harvest is a good one here, and basswood is full, and will open in 4 or 5 days. We are now practicing "modern transferring" with over 50 colonies, and with perfect and uniform success, notwithstanding the cool nights. I would never think of the old method again. Reversible frames are a great blessing, and I could not be induced to use any other. Their advantages are beyond my

greatest expectations. Mr. W. G. Fish (on page 406) has given about all the argument or proof against the "pollen theory" that I have seen lately. I never saw a case, nor before heard of one, where bees wintered on natural stores voided nothing after a long confinement, or short one either, for that matter. Is Mr. F. mistaken, or is it possible that some honey is entirely free from nitrogen? His hives must have been so arranged as to well protect their inmates from the 28° temperature when it lowered to that point. It still remains that diarrhetic excreta is nitrogen—pollen.

Alsike Clover.—A. C. Goff, Syracuse, © N. Y., asks the following:

I send a clover blossom taken from clover that grows about two-thirds as high as red clover, and very fragrant. I find patches of it in a field of red clover. What is the name of it?

[The clover is Alsike. It is not uncommon for patches to come up in red clover fields, as a little of this seed is sprinkled among the red clover seed in many cases. Yesterday I saw a 10-acre field of this Alsike clover in full bloom, and roaring with bees. It was a good sight, and the man who has it is getting an immense crop of honey.—A. J. Cook.]

Basswood Looks Promising.—Wm. E. Harris, Bay City, © Mich., on July 3, 1885, says:

The winter and spring losses in this locality have been fully 75 per cent. Bees are now building up lively on white clover. Basswood bids fair to be a very large yield.

Expecting a Large Yield.—Fayette Lee, Kokato, © Minn., on July 5, 1885, says:

I have 24 new colonies, and my apiary now numbers 114. I shall extract honey to-morrow, for the boxes and upper stories are full. I have taken off some finished sections, and now have 1,200 on the hives, and 800 more to put on. The basswood will be in bloom in one week, and then I will be kept busy. I believe that I have one of the best apiaries in the State, and can show as good a record as any in wintering, for I lost only 6 out of 80 during the past winter and spring. My bees were in the cellar 150 days. I am getting ready for 5,000 pounds of honey this year, as the basswood is full of buds, I have some colonies that have 18 frames to work on, and besides there is a half-pail full of bees lying out.

Transferring Bees, etc.—N. L. Minor, a deaf-mute bee-keeper of Clarksville, © Mo., on July 5, 1885, writes:

The BEE JOURNAL has taught me many new methods in bee-culture. There are a great many basswood trees and much clover along the hill about 400 to 500 yards south and about a mile west, north and east of my apiary. My apiary is nearly surrounded by the hill with basswood and red-bud trees. The bees are busy gathering honey from basswood and clover. I have read the discussion about transferring bees from box-hives to new hives, by Rev. O. Clute and Mr. James Heddon. Mr. Clute really has the wrong idea. There is something wrong in his plan of transferring bees. I could easily transfer bees from box-hives to new hives. I will wager five dollars that I can transfer bees at any time from February until

fall. I transferred bees from box-hives to new hives last October, and prepared them for winter; they are now in good condition. Again, I transferred 14 colonies in February and April. I favor Mr. Heddon's plan, "at any time." Some bee-keepers have the idea that it is better to transfer bees from old to new hives during apple bloom. I cannot agree with them. I united 2 or 3 swarms, and they seemed to welcome each other. They did not fight nor quarrel. I extracted the honey from some old colonies, but I got only a little. I united some of them, and then gave the empty combs to new colonies, thus saving them the time to build new combs. I do not think it a good plan to prevent swarming, nor to divide colonies. I have 36 strong colonies in splendid condition. I will be glad to help any fellow-bee-keeper out of trouble. I feel sorry for Mr. Freeborn, of Wisconsin. Let us all try to help him out of his trouble. I hope that we can do it.

Abundance of Bloom, but no Nectar.—Robert Corbett, Manhattan, © Kans., on July 6, 1885, says:

Up to this date the seasons of 1883 and 1884 were very poor, but the present season has been the most discouraging of the three, owing to the long continued cold and wet during the months of May and June, so much so that the bees killed their drones till late in June, and the wet still continues, with an abundance of bloom and a starvation of bees. Basswood has been in bloom for a week, but there is not much nectar in it. White clover, motherwort, catnip, mustard, blue-vervain and sweet clover, all are in bloom, and are fine to look upon, but there is too much wet. So our prospects are not very promising at present; but our motto is, "Try, try again."

Plenty of Swarms and Honey.—B. T. Baldwin, Marion, © Ind., on July 7, 1885, writes:

The basswood is in full bloom, and is the most abundant bloom that I have ever seen; but it is not yielding as much nectar as it has done in other years. The bees have taken the swarming fever the worst that I have ever known, and if all my queens' wings were not clipped, I would have lost nearly every one that swarmed. Five swarms came out a week ago last Sunday. They swarmed 3 or 3 times a day for 4 days, when I broke it up and divided the bees among other good working colonies, and they went to work at once. Six of my colonies have already produced over 100 pounds of extracted honey per colony.

Robber Bees—Transferring.—G. W. Ashby, Valley Station, © Ky., writes thus:

Can any of the readers of the BEE JOURNAL enlighten me on the following new (to me) case: A swarm of bees came out in due order, clustered, and was hived and put some 25 or 30 feet from the parent hive. All seemed to be working finely late in the evening, in fact too much for so short a time after swarming, and when traced up to see where such a constant stream of bees went and came in such quick succession, it was ascertained that the swarm was robbing the parent colony. It being near night when it was discovered, I closed the entrance to a single bee-space, hoping that they would forget it by the next morning; but the next day they went at it with renewed vigor; nor would they cease till the parent colony was carried some distance away and hid in the weeds. I have been keeping bees for nearly 30 years, and I have never had such an occurrence. Again, I must say

one word in favor of the modern way of transferring bees, brought about by Mr. Heddon, and seemingly berated by Mr. O. Clute and others. I have practiced it ever since I saw it in the BEE JOURNAL. I transferred some 47 colonies this season, and last season about as many, and I never had such a case as mentioned by Mr. Clute and others. I would transfer no other way. It may be that as Mr. Clute is nearer the Arctic regions than this latitude, it may have something to do with it; though there is not such a great difference.

Bees Doing Well.—Geo. E. Hilton, Fremont, Mich., on July 7, 1885, writes:

Bees are doing remarkably well considering the cool weather. On Monday, June 29, from 4 colonies I extracted 63, 56, 57 and 46 pounds respectively, and 50, 58, 42 and 46 pounds yesterday, one week later. I have one colony that has stored 100 pounds of comb honey. I attribute their strength to the good double-walled hive which I use, and which protects them from the cold changes in spring.

Making Comb Foundation.—A correspondent asks the following question:

Will Mr. Heddon please tell how to make a dipping-board for making wax sheets for comb foundation? Also the best way to dip them so as to have the sheets all of one thickness?

[I use the Given press, and make sheets L. size. I made a dipping-boiler as long as my L. sheets, i. e., 16½, with handy room to spare, say 20 inches long. The tank is about 15 inches deep, and 8 inches wide, with a strainer-division, on one side of which the wax runs in, and the other we dip. My dipping-board is made of "clear stuff," carefully smoothed, about ¾ thick, 16½ wide, and 20 inches long—pine preferred. I bring both edges, and one end of the board to an edge. Be careful to keep it reasonably sharp, and not strike it against anything. I soak the board in water over night before using. I dip it into the wax, sharp end down, holding the other end. I dip down about 3 inches further than I wish the width of the sheet; and, if dipping for brood foundation, I make a double motion, giving the upper part a double dip. Before these sheets go to the Given press, 3 inches of the thinner edge is cut off, and returned to the boiler. The edges on the board causes the sheets to separate, and without leaving any surplus strip. I have tried revolving boards and other devices, but the one above described works quickly and cleanly, and my sheets are so even that none can tell which is up-side or down-side of them.—JAS. HEDDON.]

Double-Walled Hives, Bee-Stings, etc.—E. M. Coombs, Memphis, Ind., on July 9, 1885, writes:

The BEE JOURNAL is much improved by the addition of the "Query Department," as the answers by Messrs. Heddon, Doolittle, Miller, Tinker and others are so nearly alike that a novice in bee-keeping can safely rely on their decisions. This is the poorest for the past four years for surplus honey. Last winter I lost 14 colonies out of 22, by starvation with plenty of honey in the hives. I came to the conclusion that packing in double-walled

hives was not essential, thus the loss. To those who get stings, I would say, squeeze the skin and get out a drop of blood and water; this will lessen the swelling very much, as I thus take out about ¼ of the poison. I resort to this method every time that I get stung, and I have done so for 3 or 4 years, and never fall when I get a drop of blood or water from the puncture.

Bees and White Clover.—Elias Fox, Hillsborough, Wis., on July 8, 1885, says:

I have read the statements in the BEE JOURNAL about the litigation now pending to procure damage done to a flock of sheep by bees, while the latter were harmlessly gathering nature's product from the bloom of white clover, and at the same time fertilizing the flowers. I have also read the suggestions in regard to the organization of a protective association, which I certainly favor. My opinion is, that by the time this man proves that Mr. Freeborn's or any other man's bees did his sheep damage, he will be far short of what he calls for, and he surely ought to be. Malice is a great ruler.

Insurance.—Chas. Follett, Osage, Iowa, makes this motion:

As we are now forming a Protective Union, I would move to make it also an "Insurance Mutual Bee-Keepers' Association," on the assessment plan; that each member be assessed on the number of colonies on hand on the first of June of each year; that each one reports his honey crop in September, in order to take advantage of that knowledge for marketing our crops. I want to hear from all on this suggestion. It can just as well be added to the defense organization, and be all under one management.

[This is a wide field. We were appointed a committee (by the North American Bee-Keepers' Society), 5 years ago, to report on the advisability of forming an Insurance Society for bee-keepers. We formulated a code of by-laws, but fearing it might be too much of an organization, we never dared to report on it. However, as we are now at the society-making work it might be well to DISCUSS it. Then, if it should be deemed desirable to add such a Department to the Bee-Keepers' Union, the Advisory Board can act on the suggestion advisedly.—ED.]

Best Honey Season for 12 Years.—Henry Alley, Wenham, Mass., on July 9, 1885, writes:

Our bees usually cease work about July 1st; it is now July 9th, and they continue to gather honey from white clover, which is kept in bloom by frequent showers. This is the best honey season that we have had for over 12 years.

Bees Benefit Farmers.—C. M. Hollingsworth, Winnebago, Ill., on July 8, 1885, writes:

Let bee-keepers not make the mistake of condemning those who complain of bees as trespassers, on the ground of selfishness. If bees really do more harm than good to the orchards, pasture fields, etc., that they visit, such persons are in the right. But there is abundant evidence that the benefits which bees confer in fertilizing and cross-fertilizing plants far outweighs any damage they ordinarily do. And it is on this ground that the law ought to sustain, and, I think, will sustain the apiarist; except where bees are so kept as to make them a nuisance in other ways.

Local Convention Directory.

1885. Time and place of Meeting.

July 18.—Marshall Co., at Marshalltown, Iowa. J. W. Sanders, Sec.

July 23.—Union, at Stewart, Iowa. M. E. Darby, Sec., Dexter, Iowa.

Dec. 8.—10.—Michigan State, at Detroit, Mich. H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL, Monday, 10 a. m., July 13, 1885.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Demand is light and receipts are also light. Prices range from 10¢ to 15¢ for best grades of comb honey, and for extracted, 5¢ to 7¢.

BEESWAX.—22¢ to 25¢.

R. A. BURNETT, 161 South Water St.

BOSTON.

HONEY.—We quote the following prices: Fancy white comb in 1-lb. sections, 16¢ to 18¢; the same in 2-lb. sections, 15¢ to 16¢; fancy white California 2-lb., 12¢ to 14¢. Extracted weak, 9¢ to 10¢. Sales very slow.

BEESWAX.—32¢ to 34¢ per lb.

BLAKE & RIPLEY, 57 Chatham Street.

NEW YORK.

HONEY.—We quote: Fancy white clover in 1-lb. sections, 14¢ to 15¢; fair to good white clover in 1-lb. sections, 12¢ to 13¢; fancy white clover in 2-lb. sections, 13¢ to 14¢; fair to good white clover in 2-lb. sections, 11¢ to 12¢; fancy buckwheat in 1-lb. sections, 9¢ to 10¢; fancy buckwheat in 2-lb. sections, 7¢ to 8¢. Ordinary grades, no sale. Extracted white clover, 7¢ to 8¢; extracted buckwheat, 6¢ to 7¢.

BEESWAX.—Prime yellow, 24¢ to 25¢.

MCCAUL & HILDEBRETH BROS., 34 Hudson St.

CINCINNATI.

HONEY.—There is no chance whatever in the market, which has been without life for some time. We have a good class of regular customers who use considerable honey, while outsiders can hardly be induced to purchase. We quote extracted at 4¢ to 5¢, and comb honey at 9¢ to 12¢, on arrival.

BEESWAX.—Demand is good and it brings 23¢ to 24¢ on arrival, for good yellow.

C. F. MUTH, Freeman & Central Ave.

SAN FRANCISCO.

HONEY.—The market is quiet, there being no shipping demand and not much local trade. There are receipts of both old and new. One lot of 20 cases of old extracted arrived from San Jose. White to extra white comb, 7¢ to 9¢; dark to good, 4¢ to 6¢; extracted, choice to extra white, 4¢ to 5¢; amber colored, 4¢ to 4½¢.

BEESWAX.—Quotable at 24¢ to 25¢—wholesale.

O. B. SMITH & Co., 423 Front Street.

CLEVELAND.

HONEY.—Is very dull just now during strawberry time, and although we hold at 14¢ to 15¢ per lb. best white 1-lb. sections, it is merely nominal, as there are no transactions. As soon as our people have satisfied their craving for acid fruits, they take very kindly to nice white honey, and we may look with confidence to a good demand in July, August and September.

BEESWAX.—Scarce at 28¢ to 30¢.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Small lots of new honey are beginning to come in, and fancy new comb brings a slight advance in the following prices: Choice ½-lb. sections, 15¢ to 16¢; 1-lb., 13¢ to 14¢; 2-lb., 10¢ to 12¢. Extracted, new Southern, 5¢ to 6¢; California, 7¢; new white clover, 8¢.

BEESWAX.—Weak at 25¢ to 30¢.

CLEMONS, CLOON & Co., cor. 4th & Walnut.

☞ The Marshall County Bee-Keepers' Association will meet at the Court House in Marshalltown, Iowa, on July 18, 1885, at 10.30 a. m. Subjects: "Care of Honey;" "Fall Management." All are invited.

J. W. SANDERS, Sec.

WEEKLY EDITION
OF THE

PUBLISHED BY

THOMAS G. NEWMAN & SON,
PROPRIETORS,923 & 925 WEST MADISON ST., CHICAGO, ILL.
Weekly, \$2 a year; Monthly, 50 cents.ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

Thos. G. Newman & Son will publish the AMERICAN BEE JOURNAL hereafter. The editorial department will be conducted, as heretofore, by Thomas G. Newman, and the business department by Alfred H. Newman. The firm will (as before the division, 5 years ago to-day), carry on the business of publishing the BEE JOURNAL, books and pamphlets, and keep for sale the usual assortment of bee-keepers' supplies.

If your wrapper-label reads JULY 85, please remember that your subscription runs out with this month. Renew at once, so as not to lose any numbers.

Back Numbers.—We can supply a few more of the back numbers to new subscribers. If any want them, they must be sent for soon, before they are all gone.

Honey is good food and good medicine. Its regular use will ward off doctors' bills.

For two subscribers for the Weekly BEE JOURNAL (or 8 for the Monthly) for one year, we will present a Pocket Dictionary, and send it by mail, postpaid.

All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages).....	\$1 00
" 100 colonies (220 pages).....	1 25
" 200 colonies (420 pages).....	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Preserve your papers for reference. If you have not got a Binder we will mail you one for 75 cents, or you can have one FREE if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

The National Bee-Keepers' Union.

CONSTITUTION.

ARTICLE I.—This organization shall be known as the "National Bee-Keepers' Union," and shall meet annually, or as often as necessity may require.

ARTICLE II.—Its object shall be to protect the interests of bee-keepers, and to defend their rights.

ARTICLE III.—The officers of this Union shall consist of a President, five Vice-Presidents, and a General Manager (who shall also be the Secretary and Treasurer), whose duties shall be those usually performed by such officers. They shall be elected by ballot, and hold their several offices for one year or until their successors are elected and installed; blank ballots for this purpose to be mailed to every member by the General Manager.

ARTICLE IV.—The officers shall constitute an Advisory Board, which shall determine what action shall be taken by this Union, upon the application of any bee-keepers for defense, and cause such extra assessments to be made upon all the members as may become necessary for their defense.

ARTICLE V.—Any person may become a member by paying to the General Manager an Entrance Fee of ONE DOLLAR to the Defense Fund, and an annual fee of 25 cents, for which he shall receive a printed receipt making him a member of this Union, entitled to all its rights and benefits. The annual fee shall be due on the first day of July in each year, and must be paid within 30 days in order to retain membership in this Union.

ARTICLE VI.—Donations of any amount may be made at any time to the Defense Fund, in addition to the entrance and membership fees and the regular assessments made upon the members by the Advisory Board.

ARTICLE VII.—The Defense Fund shall be used for no other purpose than to defend and protect bee-keepers in their rights, after such cases are approved by the Advisory Board, and shall only be subjected to Drafts regularly made in writing by the Advisory Board.

ARTICLE VIII.—The annual fees paid by the members shall become a general fund, from which shall be paid the legitimate expenses of this Union, such as printing, postage, clerk-hire, etc.

ARTICLE IX.—Meetings of this Union shall be held at such times and places as shall be designated by the Advisory Board, or upon the written requisition of ten members.

ARTICLE X.—This constitution may be amended by a majority vote of all the members at any time.

To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, \$2.50. Five hundred will be sent postpaid for \$10.00; or 1,000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office.

Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

Lizzie Cotton.—I would request all who have been defrauded during the past 10 years by Mrs. Lizzie Cotton, to send to me a plain statement of the case.—JAMES B. MASON, President of the Maine Bee-Keepers' State Association.

Advertisements.

HONEY WANTED.

I WILL PAY the highest market price for CHOICE EXTRACTED and COMB HONEY. Address,

A. W. PRESTON, Kansas City, Mo.

28A4t

DOUBLE-WALLED
Langstroth Hives

FOR WINTERING BEES ON SUMMER STANDS.

THEY are made identical and interchangeable with our Standard Langstroth Hives, as advertised and described in our Catalogues. All upper stories and surplus arrangements made by us will fit this double-walled brood chamber. Prices: Nailed, 50c. in the flat, 55c. per hive, in addition to our prices of the Standard Langstroth. We also make our 7 1/2-inch Caps with a sloping or Cottage Roof, which is worth 20c. nailed and 15c. flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Do you expect to go South?

ARE you in any way interested in the Farming, Stock-raising, Lumbering, or Mining interests of the SOUTH? Or are you going South for your health? If you are, why don't you subscribe for a good Southern paper? The

Blue Ridge Enterprise

gives reliable information about the Blue Ridge country of Western North Carolina—the finest section on the American Continent.

Published Weekly—only \$1.50 per year. Fifty cents in stamps will pay for the paper 3 months.

Address, "ENTERPRISE,"
28A4t WEBSTER, Jackson Co., N. C.

COMB FOUNDATION!

REDUCTION IN PRICE.

Until further notice, we will furnish Comb Foundation at 5 cents per pound less than the prices quoted in our Catalogues. This is caused by the decline in the price of beeswax.

CHAS. DADANT & SON, Hamilton, Ill.
THOS. G. NEWMAN & SON, Chicago, Ill.

Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at \$3.25 per dozen. They will hold 25 lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

New and Enlarged Edition OF BEES and HONEY,

OR THE
Management of an Apiary for Pleasure
and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, \$1.00; in paper covers, 75 cents, postpaid.

A Liberal Discount to Dealers, by the Dozen or Hundred.

The Monthly BEE JOURNAL for a year and the bound book, "Bees and Honey," will be sent for \$1.25.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

LEARN BY MAIL
SHORT-HAND and take paying positions.

AND TELEGRAPHY Instruction thorough and progress rapid.
Send for Circular.
Brown's School of Shorthand & Telegraphy,
WM. H. BROWN, Principal, New Haven, Conn.
Situations secured for pupils when competent.
26A3t

DR. FOOTE'S
HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the utmost importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only **TWENTY-FIVE CENTS** and contains 224 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness.

Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Bolls, Burns, Chills, Cold Feet, Corns, Coughs, Cholera, Diarrhoea, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only 25 Cents. Sent by Mail, post-paid,

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Sweet Clover —FOR— BEE PASTURAGE.

IT MAY be sown on all waste places at any time, and will grow on any soil—in any climate. Price, 30 cents per pound; \$2.75 per peck; \$10.00 per bushel (60 lbs.)

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

LOS ANGELES.

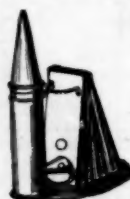
HOMES IN SOUTHERN CALIFORNIA.

"Stern winter smiles on that auspicious clime,
The fields are florid with unfading prime;
From the bleak pole no winds inclement blow;
Mould the round hail or flake the fleecy snow;
But from the breezy deep the bleas'd inhale,
The fragrant murmurs of the western gale."
—Homer.

FULL information concerning the garden spot of the world, beautiful LOS ANGELES, THE LIVELIEST AND MOST PROSPEROUS SECTION OF THE PACIFIC COAST, furnished by the Los Angeles Weekly Mirror, a mammoth 72 column best weekly PAPER, the best weekly in California.

SEND FOR IT. Single copy, three two-cent stamps; six months, \$1; one year, \$2.

Address THE TIMES-MIRROR CO.,
25A13t Los Angeles, Calif.



Bee-keepers' Supplies,

Standard Langstroth,

Quinby Standing-Frame,

And all other kinds of Hives,

MADE TO ORDER,

Quinby Smoker a specialty.

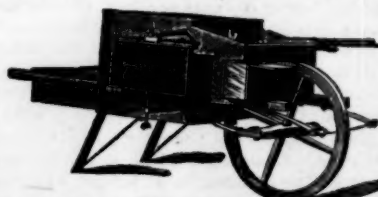
I shall supply anything you need in the Apiary Send for Illustrated Price List.

W. E. CLARK, successor to L. C. Root,
7A1y ORISKANY, Oneida County, N. Y.

\$200,000

in presents given away. Send us 5 cents postage, and by mail you will get free a package of goods of large value, that will start you in work that will at once bring you in money faster than anything else in America. All about the \$200,000 in presents with each box. Agents wanted everywhere, of either sex, of all ages, for all the time, or spare time only, to work for us at their own homes. Fortunes for all workers absolutely assured. Don't delay. H. HALLETT & Co.
51A1y Portland, Maine.

SYSTEMATIC AND CONVENIENT.



DAVIS' PATENT HONEY CARRIAGE,
REVOLVING COMB-HANGER,
Tool Box and Recording Desk Combined.

Price, complete, only \$18.00.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

EXCELSIOR HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the \$16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the \$8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The \$8.00 and \$10.00 Extractors have no covers.

For 2 American frames, 13x13 inches.....\$8 00

For 2 Langstroth " 10x18 " 8 00

For 3 " " 10x18 " 10 00

For 4 " " 10x18 " 14 00

For 2 frames of any size, 13x20 " 12 00

For 3 " " 13x20 " 12 00

For 4 " " 13x20 " 16 00

THOS. G. NEWMAN & SON,

923 & 925 West Madison Street, CHICAGO, ILL.

Re-Written and Enlarged! Third Edition

of the

BEE-KEEPERS' HANDY BOOK

300 pages and nearly 100 fine illustrations. Price

by mail, nicely bound in cloth, \$1.50 per copy.

Book and tested Queen of any race, by mail, \$2.50.

Book and sample Drone and Queen Trap, by mail, \$2.00.

Our Queens cannot be excelled for beauty,

purity, mild disposition, honey-gathering and wintering qualities. All my Queens are reared at the

"Apt. bee-farm." Send for prospectus and price list.

22A16t **HENRY ALLEY,** Wenham, Mass.

Send for "OUR HOME FRIEND,"

An 8-page, 32-column Semi-Monthly.

IT IS just the paper you need, as it contains an

Agricultural, Household, Young Folks,

Temperance, Religious and Miscellaneous

department. Only 50 cts. a year, and will be sent

3 months on TRIAL to the readers of the BEE

JOURNAL for only 10 cents. General and local

agents wanted. Address,

"OUR HOME FRIEND,"

26A6t Loudonville, Ohio.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Mich.,

Is now making a specialty of rearing FINE

ITALIAN QUEENS. All Queens reared

from the purest and best of mothers, and the

cells built in full colonies. No Queens sent

out that would not be used in the home yard.

Single Queen, \$1.00; six for \$5.00; twelve or

more, 75c. each. Tested Queens, \$2.00 each.

We can furnish White Poplar SECTIONS.

Make Money Orders payable at Flint. 16A1f

A NEW BEE-VEIL.

There are five cross

bars united by a rivet

through their center at

the top. These bars are

buttoned on to studs

on the neck-band. The

bars are of best light

spring steel; the neck-

band of best hard

spring brass; the cover

is of handsome light

material. It is very

easily put together, no trouble to put on or

take off, and folds compactly in a paper box

6x7 inches by one inch deep. There would

be no discomfort in wearing it either day or

night, and the protection against Mosquitoes,

Flies, Bees, Gnats, etc., is perfect. The

weight of the entire Veil being only five

ounces. Price, by Mail or Express, \$1.00.

Special discount to dealers, on 1/2 dozen or

larger quantities.

THOS. G. NEWMAN & SON,

923 & 925 West Madison St., CHICAGO, ILL.